

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)	
)	
Inventors: Jose M. de Freitas Garcia et al.)	Examiner: Henry W. Orr
)	
Serial #: 10/800,585)	Group Art Unit: 2176
)	
Filed: March 15, 2004)	Appeal No.: _____
)	
Title: AUTOMATIC VIEW CREATION IN A)	
SHEET SET MANAGER FOR A)	
GRAPHICS PROGRAM)	

REPLY BRIEF OF APPELLANTS

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I. INTRODUCTION

In accordance with 37 C.F.R. §41.41, Appellants' attorney hereby submits the Reply Brief of Appellants in response to the Examiner's Answer dated April 24, 2008.

No fee is required for filing this Reply Brief. However, the Office is authorized to charge any necessary fees or credit any overpayments to Deposit Account No. 50-0494 of Gates & Cooper LLP.

II. ARGUMENTS

In the Answer, the Examiner essentially reiterates the prior rejections, but also includes new arguments in response to Appellants' previous arguments. In this regard, this Reply Brief of Appellants' attorney incorporates by reference herein the entirety of the previously filed Brief of the Appellants. Moreover, Appellants' attorney presents additional arguments below.

A. Arguments directed to the first grounds for rejection: Whether claims 1-3, 12-14 and 23-25 are obvious under 35 U.S.C. §103 in view of the combination of U.S. Patent No. 6,466,953 (Bonney) and U.S. Patent Publication No. 2004/0177089 (Love).

1. Independent claims 1, 12 and 23.

Independent claims 1, 12 and 23 recite the function of Automatic View Creation, such that the Sheet Set Manager presents a user with a list of the views defined in a Sheet Set and the user places a view from the list onto a Sheet to invoke the Automatic View Creation. Neither of the references, taken individually or in combination, teach or suggest these limitations.

The Office Action asserted that Bonney teaches a CAD program that is capable of functioning as a Sheet Set Manager and that Bonney teaches drawings and views, which the Office Action considers to be a set of sheets and subsets of the sheets. However, the Office Action admitted that Bonney fails to expressly teach presenting a user with a list of views defined in a Sheet Set and the user placing a view from the list onto a Sheet. Nonetheless, the Office Action asserted that Love teaches that a user can select a view from a list of views and display the drawing containing the selected view. The Office Action then stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to manage the views of the drawings generated by Bonney's computer aided program with the list of views as taught by Love to provide the benefit of an effective identification of separate views in a drawing.

Now, the Examiner's Answer asserts the following:

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Examiner does not rely on "a compassion [sic: comparison] of views" as described in the above-cited portions [i.e. Appellants' arguments] to teach a "view creation". Firstly, Examiner notes that Appellant's specification recites "In addition to automatically placing a View onto a Sheet, the automatic view creation function also gives the user the opportunity to adjust the scale of the View during operation itself" (see spec par. 105). Based on this cited portion of the specification, Examiner interprets a view creation to be at least capable of automatically placing a View onto a Sheet. In comparison, Love teaches selecting a view and displaying a drawing containing the selected view (see par. 58). Therefore, Examiner interprets selecting a view and displaying a drawing containing the selected view as taught by Love to anticipate a "view creation" as recited in the claims because the selected view is automatically placed onto a drawing in response to the user selection of the view.

Thus, Love does teach or suggest presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation.

Appellants' attorney disagrees.

Recall that Appellants' independent claim 1, for example, recites the following:

1. A method for operating a graphics program in a computer, comprising:
 - performing one or more functions of a Sheet Set Manager in the graphics program,
 - (a) wherein the Sheet Set Manager manages one or more Sheet Sets, each of the Sheet Sets comprises a collection of zero or more Sheets and Subsets of the Sheets, each of the Sheets comprises a drawing, layout or view and the Sheet Set Manager manages one or more different views for the Sheets; and
 - (b) wherein the function comprises an Automatic View Creation, such that the Sheet Set Manager presents a user with a list of the views defined in the Sheet Set and the user places a view from the list onto a Sheet to invoke the Automatic View Creation.

At the locations in Love cited by the Office Action, namely, paragraphs [0002], [0007] and [0058], the following is described:

[0002] In designing new products, the designer or engineer can help to reduce costs by being able to retrieve drawings of existing components from a database of drawings in a Computer Aided Design (CAD) system. This can help to prevent unnecessary duplication of component designs or save time by adapting designs of existing components. The effectiveness of a retrieval system depends on its ability to search a large number of drawings of components so as to identify a drawing or drawings of one or more similar components.

* * *

[0007] Another problem arises when a drawing comprises more than one view. For example, an engineering drawing of a component may include separate views of different elevations, sectional views or views showing parts of the component in greater detail. Identification of separate views in a drawing represented by a bit-map is difficult because bit-map systems rely on pattern recognition.

* * *

[0058] The system allows the designer to enter a drawing or sketch of a required component. The system performs a comparison of the view code for the sketch with the view codes of one or more drawings in the database and determines a similarity index for each view compared. The user can then select the most similar view, or another view from a list of views in order of similarity and display the drawing containing the selected view.

However, Appellants' attorney respectfully submits that paragraph [0058] of Love should be read in context. Consider, for example, paragraphs [0051]-[0057] of Love, which are associated with paragraph [0058]:

[0051] According to a third aspect of the present invention there is provided a **drawing retrieval system** for a CAD system comprising means for entering and means for displaying a drawing, and a memory for storing data including a database of drawings, the drawing retrieval system comprising:

[0052] a) identifying means for identifying a feature of a view in a drawing, wherein the feature comprises a graphic entity or a group of graphic entities;

[0053] b) means for extracting properties of the feature, wherein the properties include vector properties associated with the entity or group of entities;

[0054] c) coding means for generating code bits representative of the extracted properties and for adding the code bits to a view code for the view;

[0055] d) means for storing the view code in the memory;

[0056] **e) comparing means for comparing (i) a first view code of a first view in a first drawing entered in the entering means with (ii) a second view code of a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view; and**

[0057] **f) means for selecting the second drawing for retrieval from the database for display on the display means on the basis of the similarity index.**

[0058] The system allows the designer to **enter a drawing or sketch** of a required component. The system **performs a comparison of the view code for the sketch with the view codes of one or more drawings in the database** and determines a similarity index for each view compared. **The user can then select the most similar view, or another view from a list of views in order of similarity, and display the drawing containing the selected view.**

In the above portions of Love, the user enters a first drawing, the system performs a comparison of a view code for the first drawing with the view codes of second drawings stored in the database, the user selects a view from a list of views resulting from the comparison, and the system displays the second drawing from the database containing the selected view.

However, the second drawing being displayed in Love is the one stored in the database and associated with the view that was selected, not the first drawing that was entered.

Consequently, the above portions of Love describe a comparison of views being performed, with the drawing from the database having the most similar (pre-existing) view being selected and displayed, not a view creation by the user placing a view from a list onto a sheet to invoke the view creation, as recited in Appellants' claims.

Thus, Appellants' attorney submits that independent claims 1, 12 and 23 are patentable over the combination of Bonney and Love.

2. Dependent claims 2, 13 and 24.

Dependent claims 2, 13 and 24 recite that boundaries for the views are re-defined after creation. The Office Action asserted that these limitations are taught by Love at paragraphs [0021]-[0023], which are set forth below:

[0021] In a preferred embodiment, the method further includes identifying the views in a drawing for coding. Preferably, identifying the views comprises defining a boundary enclosing an area which includes the entities in the drawing and dividing the area to define a plurality of view areas, such that each view area includes one or more entities, and no entity is included in more than one area.

[0022] Thus, having identified the views to be coded, the method can readily code each of the views in the drawing to provide a complete set of coded views for the drawing.

[0023] Preferably, the boundary is a bounding rectangle, the step of dividing the boundary to define a plurality of view areas comprising splitting the bounding rectangle to define a plurality of view rectangles.

Now, the Examiner's Answer asserts the following:

Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

Moreover, the Examiner notes that the "comparison" features taught in Love are not used to teach "view creation" in any of the claims.

Appellants' attorney disagrees.

The cited paragraphs of Love merely describe identifying the views in a drawing, in order to code the views for later comparison purposes. Nowhere does Love describe re-defining boundaries for views after the views are created, in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 2, 13 and 24 are patentable over the combination of Bonney and Love.

3. Dependent claims 3, 14 and 25.

Dependent claims 3, 14 and 25 recite that each of the views is associated with a viewport. These claims stand or fall with independent claims 1, 12 and 23.

B. Arguments directed to the second grounds for rejection: Whether claims 4, 15 and 26 are obvious under 35 U.S.C. §103 in view of the combination of Bonney, Love and U.S. Patent Publication No. 2003/0031380 (Song).

1. Dependent claims 4, 15 and 26.

Dependent claims 4, 15 and 26 recite that each of the views is represented by a thumbnail preview image displayed by the Sheet Set Manager. These claims stand or fall with independent claims 1, 12 and 23.

C. Arguments directed to the third grounds for rejection: Whether claims 5-11, 16-22 and 27-33 are obvious under 35 U.S.C. §103 in view of the combination of Bonney, Love and U.S. Patent Publication No. 2003/0043177 (Kawai).

1. Dependent claims 5, 16 and 27.

Dependent claims 5, 16 and 27 recite that the Sheet Set Manager automatically creates one or more different views for the Sheets in response to a user command. The Office Action asserted that these limitations are taught by Kawai at paragraph [0047] and in Figures 7, 8 and 9, which are set forth below:

[0047] Accordingly, the following effects can be obtained with respect to this embodiment. (1) The exploded view 37 is created as the instruction manual for the assembling operation of the product M by moving the position of the part constructed from the shape data in a predetermined disassembling direction based on the assembly construction data and the assembling condition data by the control device 2. Accordingly, the operator (i.e., user) can automatically create the exploded view 37 based on the support by the computer and can obtain the exploded view 37 easily when replacing the parts for the maintenance of the product M.

FIG. 7

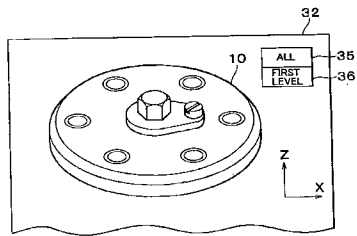


FIG. 8

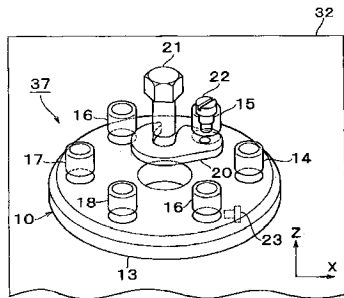
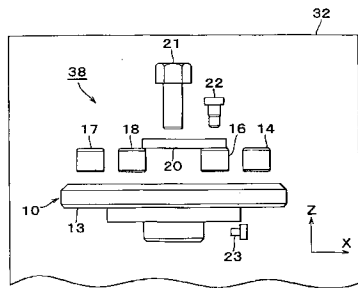


FIG. 9



Now, the Examiner's Answer asserts the following:

Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

Appellants' attorney disagrees.

The cited paragraph and Figures of Kawai merely describe creating a view in another context, but not in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 5, 16 and 27 are patentable over the combination of Bonney, Love and Kawai.

2. Dependent claims 6, 17 and 28.

Dependent claims 6, 17 and 28 recite that the user command comprises a drag-and-drop operation. These claims stand or fall with dependent claims 15, 16 and 27.

3. Dependent claims 7, 18 and 29.

Dependent claims 7, 18 and 29 recite that the Sheet Set Manager creates a reference to a file containing the automatically created view. The Office Action asserted that these limitations are taught by Bonney at col. 6, lines 15-17, which is set forth below:

It is important to note that sheets may be moved between files. For example, the sheets represented by icons 310, 320 and 330 may originally have been stored in a file while the sheet represented by icon 330 may have been stored in a separate file. After the user drags icon 330 to icon 310, the sheet represented by icon 330 is moved to the file containing the four sheets represented by icons 310, 320 and 330. Thus, a user may move sheets between files graphically.

Now, the Examiner's Answer asserts the following:

Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

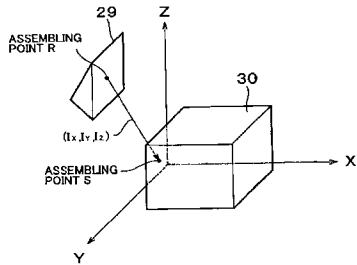
Appellants' attorney disagrees.

The cited paragraph of Bonney merely refers to a sheet represented by an icon having been stored in a file, but not a file containing an automatically created view, wherein the view was created in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 7, 18 and 29 are patentable over the combination of Bonney, Love and Kawai.

4. Dependent claims 8, 19 and 30.

Dependent claims 8, 19 and 30 recite that the Sheet Set Manager creates a viewport displaying a geometric region defined in the automatically created view. The Office Action asserted that these limitations are taught by Kawai in Figure 5.

FIG. 5



Now, the Examiner's Answer asserts the following:

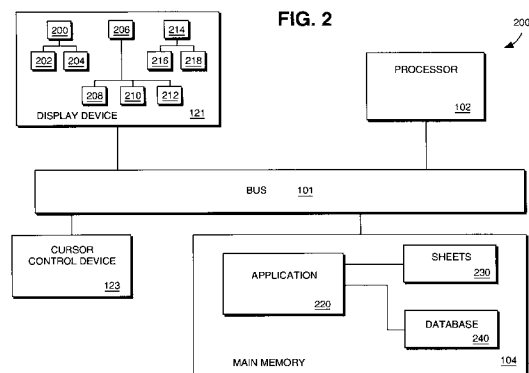
Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

Appellants' attorney disagrees.

The cited Figure of Kawai merely refers to a view, but not a viewport for an automatically created view, wherein the view was created in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 8, 19 and 30 are patentable over the combination of Bonney, Love and Kawai.

5. Dependent claims 9, 20 and 31.

Dependent claims 9, 20 and 31 recite that the automatically created view is placed in a hierarchical representation displayed on the computer. The Office Action asserted that these limitations are taught by Bonney in Figure 2, which is set forth below:



Now, the Examiner's Answer asserts the following:

Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

Appellants' attorney disagrees.

The cited Figure of Bonney merely refers to a hierarchical representation of drawings, but not an automatically created view in a hierarchical representation, wherein the view was created in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 9, 20 and 31 are patentable over the combination of Bonney, Love and Kawai.

6. Dependent claims 10, 21 and 32.

Dependent claims 10, 21 and 32 recite that the Sheet Set Manager places a label block associated with the automatically created view into the Sheet, with fields to display label information for the automatically created view, which updates automatically if the field's values change. The Office Action asserted that these limitations are taught by Bonney at col. 6, lines 33-37, which is set forth below:

FIG. 4 is one embodiment of an icon linked to an object. The example of FIG. 4 is described in terms of a single drawing sheet and a single corresponding icon for simplicity. Any number of sheets in memory and icons can be supported. Also, sheet 400 can be stored in a memory or storage device other than main memory 104. Main memory 104 stores sheet 400 includes a drawing of a device or some other representation within a CAD application 430. Sheet 400 also includes title block 410 having multiple fields including field 420. Display device 121 displays icon 440 representing sheet 400. Icon 440 includes field 420' that is automatically updated when field 420 on sheet 400 is modified. Of course, a reverse update can also be provided. If field 420' of icon 440 is modified field 420 of sheet 400 can be automatically updated. Automatic updates are not limited to fields within title blocks. Any field or component of sheet 400 can be linked to icon 440.

Now, the Examiner's Answer asserts the following:

Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

Appellants' attorney disagrees.

The cited paragraph of Bonney merely refers to a field of a sheet that is automatically updated, but not a label block associated with an automatically created view, wherein the view was created in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 10, 21 and 32 are patentable over the combination of Bonney, Love and Kawai.

7. Dependent claims 11, 22 and 33.

Dependent claims 11, 22 and 33 recite that the Sheet Set Manager allows a user to adjust a scale of the automatically created view. The Office Action asserted that these limitations are taught by Kawai at paragraph [0033], which is set forth below:

[0033] By clicking each button 25 corresponding to the parts 13-23 on the input screen 24, the assembling condition data of each part may then be input by further displaying an input screen 26 shown in FIG. 4. The input screen 26 includes a space 27 for inputting the assembling position (i.e., reference position) and a space 28 for inputting the assembling direction (i.e., three-dimensional direction). The assembling condition data corresponds to the disassembling direction condition data.

Now, the Examiner's Answer asserts the following:

Essentially, this argument is substantially the same argument previously set forth for claim 1 above. The Examiner has already rebutted this argument by explaining how Love teaches or suggests presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke view creation as indicated above. Therefore, the applied references are in context with Appellants' claimed invention.

Appellants' attorney disagrees.

The cited paragraph of Kawai merely refers to the user's ability to input or specify a reference position (assembling position) and a direction (assembling direction) when constructing an assembly drawing, but not adjusting the scale of an automatically created view, wherein the view was created in the same context as Appellants' claimed invention, namely, presenting a user with a list of the views, where the user places a view from the list onto a sheet to invoke automatic view creation. Thus, Appellants' attorney submits that dependent claims 11, 22 and 33 are patentable over the combination of Bonney, Love and Kawai.

D. Summary.

The references, taken individually or in combination, fail to teach the Appellants' claimed invention. Further, the various elements of the Appellants' claimed invention together provide operational advantages over the systems disclosed in the references. In addition, Appellants' invention solves problems not recognized by the references. Consequently, Appellants' attorney submits that claims 1-18 are allowable over the references.

III. CONCLUSION

In light of the above arguments, Appellants' attorney respectfully submits that the cited references do not anticipate nor render obvious the claimed invention. More specifically, Appellants' claims recite novel physical features which patentably distinguish over any and all references under 35 U.S.C. §§ 102 and 103.

As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

Respectfully submitted,

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Date: June 24, 2008

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